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Too brutal for war: comparing rationales for weapon taboos

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Abstract

What makes a weapon too horrific to use? This study investigates public attitudes toward the use of different weapon types using a conjoint survey experiment fielded on a U.S. sample. By randomly varying key attributes of military strikes—expected civilian casualties, operational effectiveness, and weapon type—we isolate the causal effects of each on public support. Casualty estimates exert the strongest influence, and effectiveness also matters. But we find that respondents rely heavily on powerful categorical heuristics about weapon types. These preferences persist even when other strike characteristics are held constant. The results reveal a robust hierarchy: cyber attacks were most favored, followed by conventional strikes, then cluster munitions over chemical, biological, and finally nuclear weapons. In fact, military operations using more favored weapons were often supported over more effective, or less lethal, ones employing disfavored armaments. These patterns reflect public intuitions about which weapons are perceived as brutal, indiscriminate, or illegitimate. Our study therefore has broad theoretical implications for understanding how weapon taboos interact with instrumental factors. It offers vital insights into the complex interplay of public preferences for military operations, weapon transfers, and arms control.

Keywords international norms, weapon taboos, weapons of mass destruction, public opinion, survey experiment

Introduction

The norms of war are as old as war itself. In the *Iliad*, one of the earliest war epics, Achilles loses favor with the gods and invites his demise by defiling the body of Hector. In the second century, the Indian Manava-Dharmasastra (Laws of Manu) instructed leaders not to "strike with weapons concealed, nor with [arrows] barbed, poisoned, or the points of which are blazed with fire" (Green, 1998). In 1139, the Second Lateran Council forbade using the crossbow against Christians as "hateful to God, and unfit to be used …owing to the barbarous wounds it inflicted" (Spenser, 1908).

Norms have restricted acts and weapons of warfare throughout human history and have evolved with military technology. Though ranged weapons were considered cowardly for much of antiquity, the rifle eventually replaced the sword, and melee combat is now mostly reserved for sport. New weapons are often met by new normative prohibitions. The rise of exploding bullets in the 1860s resulted in an international ban—citing their brutality—with the 1868 Saint Petersburg Declaration. "Dum dum" expanding bullets entered European stockpiles before the 1899 Hague Convention proscribed them due to fears of unnecessary suffering (Abbenhuis et al., 2022). The list of weapon norms has since expanded, although scholars usually study such prohibitions individually rather than comparatively.

When scientific advances increased the destructiveness of war, norms emerged to restrict weapons of mass destruction (WMDs). Most notable among these is the nuclear taboo. But this is not the only normative prohibition against a modern weapon. Many states have joined the conventions banning chemical and biological weapons. There are also legal instruments—though not universally accepted—banning conventional anti-personnel landmines, cluster munitions, incendiary weapons, and blinding lasers.

Discussions of these so-called horror weapons are increasingly drawing reactions from publics. In December 2022, 69% of Americans reported anxiety about a possible nuclear war amid Russian nuclear threats during Moscow's war on Ukraine (Bollfrass & Herzog, 2022; Hadley, 2022). Debates about military aid to Ukraine, Israel, and other allies are also likely to continue, and public

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perceptions of various weapons have impacted U.S. policy. Initially, there was a strong bipartisan consensus for arming Ukraine. But eventually a plurality of self-identified Democrats backed the Biden administration's decision to send cluster munitions to Kyiv, while a majority of Republicans opposed it (Frankovic et al., 2023). The war in Gaza similarly raised questions about the types of weapons supplied to U.S. allies. Navigating this landscape will be important as U.S. policymakers manage a complex, multipolar future.

Recent survey experiments suggest that public attitudes can alter foreign policy. Chu and Recchia (2022) provide evidence that exposure to public opinion data changes high-level politicians' viewpoints on international issues. Lin-Greenberg (2021) demonstrates that public resistance makes military officers wary of recommending using force. Smetana et al. (2025) show that public preferences can affect policymakers' willingness to support nuclear weapon use. Regarding anti-weapon norms, public support and opposition have plausible implications for U.S. strike options, weapon sales, military aid, and arms control policy.

In this study, we seek to better understand how public aversions converge and diverge among modern armaments. We ask: What explains public support and opposition for different weapon systems? To investigate this phenomenon, we explore normative and strategic forces that could affect public receptivity to weapon use. To do so, we leverage a conjoint survey experiment conducted in January 2023 on 1,046 American adults. We find that casualty levels are the main determinant of support for military strikes. However, Americans have a clear hierarchy of preferences regarding the choice of strike weapons that may supersede purely utilitarian calculations. Put simply, Americans are more averse to some weapons than others.

Our study makes a novel theoretical contribution by empirically isolating the influence of weapon type on public opinion. While we focus on weapon categories, we recognize that "type" is a proxy for characteristics that shape public perceptions. Ultimately, we argue that these categories function as powerful heuristics, triggering normative frameworks that shape public preferences, even when controlling for expected casualties and strike effectiveness. While our research acknowledges the complexity of real-world weapon use, it sheds new light on the enduring normative power of weapon types in shaping public views.

On weapon aversions

Our work builds on decades of scholarship investigating rationales underlying aversions to various weapons. Extant work, however, has focused overwhelmingly on differentiating nuclear and conventional weapons, generally isolating individual drivers of support for strikes. We build on these studies by comparing a wide range of weapon systems and strategic and moral considerations against one another, moving beyond siloed analyses. Our study therefore more precisely captures determinants of what makes military operations achieve popular support or opposition.

Below, we outline prominent scholarly arguments on weapon aversions and evaluate how they might operate. Our study's experimental test of these positions provides: (1) systematic insight into the public hierarchy of weapon aversions; (2) new evidence about the relative importance of normative and strategic logics underpinning weapon aversions; and (3) cross-system data about the foundations of weapon aversions.

Taboo weapons

The concept of taboo weapons has long been present in international relations scholarship. Price and Tannenwald (1996) theorized that rationalist explanations for states' refusal to use powerful, potentially game-changing nuclear and chemical arms in combat were insufficient. Instead, the authors posited that normative taboos prevented such occurrences. Tannenwald (2005, p. 5) later elaborated:

> In reality, however, nuclear weapons have come to be defined as abhorrent and unacceptable weapons of mass destruction, with a taboo on their use. This taboo is associated with a widespread revulsion toward nuclear weapons and broadly held inhibitions on their use.

Scholars continue to debate whether the nuclear taboo exists, and if it does, its nature and relative strength. In seminal works, Press et al. (2013) and Sagan and Valentino (2017) found little evidence for the taboo. They argued that public views about nuclear weapon use were shaped by consequentialist factors, such as the effectiveness of nuclear strikes relative to conventional alternatives. Other studies have found mixed evidence for the taboo (Carpenter & Montgomery, 2020).

Although the nuclear taboo has been extensively studied, Smetana et al. (2023) note that scholars rarely assess the strength of norms against the use of different weapons. Many studies compare nuclear weapons only to very dissimilar conventional weapons, possibly overstating the prominence of the nuclear taboo. For some arms, notably biological weapons or cluster munitions, less is known about the relative nature of public aversions.

Smetana et al. (2023) specifically compare norms against nuclear and chemical weapons use. They found greater aversion to chemical weapons, potentially due to their association with "rogue" states. However, this runs counter to much of the nuclear taboo literature, which presupposes a far stronger taboo for nuclear weapons than other armaments. Moreover, evidence on the chemical taboo is mixed; Blair et al. (2022) shows many self-identified believers in this taboo are "insincere."

For emerging domains, such as cyber arms, scholarship often "learns by analogy." For example, Nye (2018) argues that cyber weapons may be taboo by comparing them to nuclear arms. There is, however, limited empirical backing for this argument, and other scholars emphasize the perceived usability of cyber weapons (Valeriano & Maness, 2022). Indeed, outside of studies on nuclear weapons, there is little systematic exploration of whether and why weapons might be taboo among the public. This obscures the foundations of public aversion and where different weapons sit in a perceived hierarchy of public approval or disdain.

We identify two main rationalist arguments attempting to explain weapon taboos and compare them with normative arguments.[1] Unpacking when and why normative or strategic considerations shape public opinion helps illuminate distinctions between conventional arms, WMDs, cluster munitions, and novel capabilities like cyber weapons. Moreover, it allows us to provide

systematic insights into a central debate on the relative importance of normative versus strategic reasoning.

Scholars have argued that both moral and strategic calculations factor into choices about using weapons. For example, Bowen et al. (2023) show that perceptions of nuclear arms' strategic advantages are conditional on moral disadvantages. Post and Sechser (2017) argue that information about the nuclear non-use precedent and the immorality of nuclear weapons can moderate strategic thinking. Koch and Wells (2021) find that both self-interest and moral thinking can diminish public support for nuclear use when the consequences are known. Carpenter and Montgomery (2020) contend that the nuclear taboo is shaped by the civilian immunity norm. Not only do these studies disagree about the foundations of public aversion to weapons, they focus on a small number of explanations for aversions rather than systematically comparing rationalist and normative explanations across armament systems. Indeed, most studies are limited by their sole focus on nuclear weapons. This risks confusing weapon-specific attitudes with general insights about the relative importance of moral and strategic reasoning.

Taboo or not?

What comprises a weapon taboo? Research indicates that a major concern for publics is whether a weapon is discriminate. Systems that can target only military personnel and infrastructure are likely to be more popular, as Americans are sensitive to civilian casualties (Carpenter & Montgomery, 2020). Limited public knowledge of weapon systems, however, means that these preferences are applied to broad categories. For example, publics strongly associate nuclear weapons with indiscriminate destruction, although the specifics of nuclear yields and delivery systems are not widely understood.

Studies by Gelpi et al. (2009) and Walsh (2015) have presented convincing evidence that foreign civilian casualties reduce U.S. public support for military operations. Allison et al. (2022) showed that this even extends to North Korean civilians. Interestingly, Traven et al. (2023) demonstrate that Americans are likely to believe that high levels of collateral damage were intentional, reducing support for such strikes. These findings point to trade-offs between increasing the odds of victory and harming civilians. Americans may be willing to sacrifice some degree of effectiveness to reduce collateral damage.

This may be, in part, because of the disgust and fear that killing by indiscriminate weapons arouses, which Bentley (2022) contends is central to anti-use norms. For example, Diaz-Maurin (2022) warns that the warhead on a standard U.S. Minuteman-III nuclear-tipped missile would "cause first-degree burns as far as 13 kilometers (8 miles) from ground zero." The U.S. atomic bombings of Hiroshima and Nagasaki in August 1945 produced unforgettable images of destroyed Japanese cities and the effects of radioactive fallout. They created "a special horrifying status" for nuclear arms (Tannenwald, 1999, p. 444).

While some munitions can be used in ways that limit civilian casualties, other weapons—particularly nuclear arms (Eden, 2004; Glasstone & Dolan, 1977)—are very difficult to use discriminately. Weapon types may also vary widely in their targetability. Chemical and biological weapons can be applied narrowly, as in the case of anthrax, or can risk spiraling out of control. Weapons that are more precise and discriminate (such as autonomous systems) may be easier to use by enabling "moral disengagement" (Vallor, 2013). This may also occur with remote operators for cyber or drone strikes.

Cyberattacks—particularly those targeting infrastructure or one's personal security–can still generate perceptions of distress and threat (Shandler et al., 2023). Disentangling the effects of cyber operations can be complex, as they are increasingly used in conjunction with other attack modalities. The dominance of multi-domain warfare has seen the expansion of cyber capabilities supplementing more conventional operations, as seen during the 2025 Iran–Israel conflict.

Non-WMD systems generally have less indiscriminate effects. For example, because of entangled civilian and military infrastructure for cyber operations, some scholars have expressed concerns about discrimination (Brantly, 2020; Petkis, 2015). Nevertheless, most cyber attacks are precise and minimally destructive. Cyber weapons may therefore be viewed as "clean" and more usable. Weapons more traditionally employed on the battlefield—such as conventional and cluster munitions—may be relatively discriminate. However, both still cause civilian casualties, with cluster weapons usually inflicting more collateral damage than conventional alternatives.

Considerations about the indiscriminate nature and horrific impacts of certain weapons underlie legal prohibitions that codify and reinforce norms. Many international treaties ban or limit weapon systems, though some have more universal membership than others.[2] Scholars have also shown that legal primes in survey experiments may affect public support for military strikes (Carpenter & Montgomery, 2020; Carpenter et al., 2021), perhaps by activating moral reasoning. Tyler and Darley (1999) and Tyler (2006) imply that laws serve as more than heuristics for normative considerations; violating laws carries an independent moral cost. This matters because authors like Kertzer et al. (2014) and Smetana and Vranka (2021) have shown that moral foundations drive individuals' foreign policy preferences. This suggests that weapon systems that are indiscriminate, illegal, or cause particularly horrific effects to victims will be seen as undesirable. Indeed, recent research by Dill and Schubiger (2021) demonstrates that public preferences in wartime often align with principles of international law, such as distinction and necessity. These views persist even when legality is not explicitly cued, suggesting an implicit resonance of norms as citizens navigate complex trade-offs between instrumental, moral, and legal considerations.

Questions of legality can be complicated by differences between international and domestic law. Some prohibited

[2] The near-universal Chemical and Biological Weapons Conventions outlaw the use of these arms. The United States is not party to any treaty explicitly banning nuclear weapons and has rejected the Treaty on the Prohibition of Nuclear Weapons, popularly known as the Nuclear Ban Treaty (Herzog et al., 2022). Still, some international humanitarian laws, such as the Geneva Conventions, place limitations on nuclear weapon use because of its indiscriminate nature. Cluster munitions are prohibited by the Convention on Cluster Munitions, but Washington is not party to this ban. The United States has also not joined the Anti-Personnel Mine Ban Convention. Most other conventional weapons are legally permissible, provided that their use complies with the laws of warfare. No current international law bans cyber weapons. It remains contested whether cyber operations constitute an act of warfare, with the general consensus being that they must cause kinetic effects to generate self-defense rights. Legal scholars have debated whether "bloodless" weapons such as cyber and space assets should be classified as weapons at all (Blake & Imburgia, 2010). The standard requiring kinetic effects may be evolving, as the updated *Tallinn Manual* suggests that severe disruptions to infrastructure could be considered acts of warfare. But public views may shift as the norms and laws governing certain weapons evolve.

weapons of war may not be seen as immoral when they are legal for use in other contexts. Using riot control agents against enemy combatants violates the Chemical Weapons Convention. Yet, this is unlikely to trigger public aversion, as the use of these agents by governments against civilians is generally legal. Violations on hollow-point or expanding ammunition in wartime may similarly fail to rouse strong feelings among Americans when they are available for purchase at big-box retailers.

The heuristic considerations above reflect underlying normative concerns associated with weapon-type categories. They motivate our first hypothesis:

H1 (Norms): Public aversion to weapon systems will be shaped by the perceptions of their indiscriminate and horrific nature.

In contrast to purely normative arguments, some scholars argue that empirical patterns of aversion are not about the weapons themselves. Rather, rationalist aversion to weapons may be about their impact. Studies have therefore revealed an inverse relationship between casualty numbers and support among Americans for military operations (Eichenberg, 2005; Gelpi et al., 2009).

For instance, Horowitz and Narang (2014, p. 510) call chemical and biological weapons "the poor man's atomic bomb" due to their relatively less destructive effects and ease of development. Unsurprisingly, they find that states seeking WMDs for deterrence become significantly less interested in gas and germ warfare after obtaining the bomb. These weapons are relatively less destructive, and we accordingly expect lower aversion to chemical and biological weapons than nuclear arms. Conventional weapons vary dramatically in their destructiveness—from a single bullet to a high-yield conventional bomb—but are generally less destructive than WMDs. While cluster munitions are generally more destructive than non-cluster weapons with a similar explosive yield, their power is still relatively limited. While there are real-world complexities and exceptions to these "rules of thumb," we argue that the public's standard, heuristic understanding of these weapons moderates how they evaluate their situational use.

Although the consequences of a major cyber attack on critical infrastructure could be devastating, cyber operations have so far had relatively minimal observable effects. The general conception of cyber weapons is that they are bloodless, inflicting damage to systems not humans (Blake & Imburgia, 2010). Indeed, cyber operations are often seen as less escalatory.[3] However, cyber attacks may have broader consequences, such as the erosion of trust in government and democracy (Schneider, 2022; Shandler & Gomez, 2023), and may trigger a "fear of the unknown" that can either be escalatory (Schneider et al., 2023) or de-escalatory (Gomez & Villar, 2018).

These patterns of destructiveness suggest that what look like normative weapon aversions could actually be responses to rational expectations. Nuclear weapons may be avoided because they are likely to be extremely destructive and therefore ill-suited to most military operations. After all, even if one is unconcerned about moral repercussions, military strategies that lead to high casualty numbers could cause adverse effects: reputational damage, diminished support from allies, and conflict escalation.

For example, Press et al. (2013) found that the main determinant of anti-nuclear views among Americans was a fear of setting a precedent resulting in nuclear strikes against the United States. Even the use of low-yield, tactical nuclear weapons carries this potential risk. Publics worry about threats to themselves and their loved ones. It is thus unsurprising that survey experiments featuring the United States squaring off with non-nuclear adversaries (e.g., Press, Sagan, and Valentino, 2013; Sagan & Valentino, 2017) found greater support for nuclear strikes than those involving nuclear-armed rivals (e.g., Allison et al., 2022; Koch & Wells, 2021; Sukin, 2020). Likewise, as Ochsner (1949) explains, the main reason Adolf Hitler opted against large-scale gas warfare in the Second World War was his fear that the Allies might use these WMDs against the German homeland.

However, the above literature largely focuses on comparing normative versus strategic reasoning for the use of single weapon systems. This is a key limitation. For example, work comparing the nuclear taboo to strategic determinants of anti-nuclear views may not translate into how the public thinks about cyber weapons.

By assessing reasoning across weapon systems, we can more systematically investigate the importance of a weapon's destructiveness relative to other foundations of aversion. Strategic reasoning motivates our second hypothesis:

H2 (Destructiveness): Public aversion will increase with the perceived destructiveness of weapon use.

A second rationalist explanation for aversions may relate to expectations about the effectiveness of weapons. For instance, even highly destructive operations may be seen as acceptable if they succeed. As Brody and Morin (1991) stated when analyzing the Vietnam and first Gulf Wars: "[P]ublic support during war is informed by perceptions of policy success or failure." Sagan and Valentino (2017) found that a majority of Americans would back nuclear strikes "killing 2 million Iranian civilians, if they believed that such use would save the lives of 20,000 U.S. soldiers" (Sagan & Valentino, 2017, p. 45). This aligns with Eichenberg (2005, p. 147) in that "successful military operations enjoy high support, even when the objective is unpopular and casualties are suffered."

Existing literature demonstrates that individuals respond to changes in perceived effectiveness of strikes (Press et al., 2013; Sagan & Valentino, 2017) and care about civilian casualties (Allison et al., 2022; Gelpi et al., 2009; Walsh, 2015). While our study is designed to isolate features of specific weapons from these factors—for example, controlling for effectiveness of each strike regardless of the weapon used—we anticipate that the public will prefer more effective strikes with a greater probability of accomplishing their mission.

Considerations of military effectiveness form the basis for our third hypothesis:

H3 (Effectiveness): Public support for military strikes will increase with their perceived effectivenesss.

Yet, this effect may be constrained by normative aversions to certain types of armaments and concerns about destruction.

[3] This may be because of "firebreaks" containing their effects, fears of retaliatory escalation, or risks of entangling civilian infrastructure (Maness & Valeriano, 2016; Schneider, 2017; Shandler et al., 2022; Valeriano & Maness, 2022).

Together, we argue, that these three theoretical mechanisms explain why some weapons tend to be less used than others. The preceding discussion shows why it is critical to move beyond the extant literature's focus on single weapon types and limited comparisons. Likewise, it demonstrates the need to untangle a complex interplay of normative and rationalist reasoning. We disaggregate these factors by asking respondents to make comparisons across a range of strike options. This allows us to assess the comparative strength of weapon aversions and to assess their moral and strategic foundations.

Methodology

To test our hypotheses, we conducted a conjoint survey experiment in January 2023 on a sample of 1,046 American adults using the online platform Prolific. Subjects were recruited using stratified quotas based on age, sex, and ethnicity, matched to 2023 U.S. demographics. Because the sample is drawn from a nonprobability online panel using quota matching rather than stratified random sampling, we cannot claim full representativeness.[4] Nevertheless, Prolific's samples perform favorably to many alternatives for obtaining U.S. samples that mirror the country's population demographics (Palan & Schitter, 2018).

The United States is the only country with a history of using each studied weapon, making its public the ideal respondent base.[5] Since previous surveys have shown that U.S. public attitudes about weapon use are echoed elsewhere—Britain, France, Israel, India, Japan, Singapore, and South Korea—we expect that these results may look similar in other settings, although further research is needed (Allison et al., 2022; Dill et al., 2022; Lin-Greenberg, 2023; Shandler et al., 2022; Sukin, 2020). Generalizability across countries may, however, depend on capabilities and norms.[6]

Our experiment provided respondents with information about a hypothetical scenario. In the prompt, Japan was involved in a simultaneous conflict with China and Russia over competing claims for natural resources in the East China Sea.[7] Both states have contested territorial claims with Japan in Northeast Asia and have cooperated on regional military drills. We included both China and Russia to validate that views were not driven by current geopolitical trends, such as news coverage of Russian aggression against Ukraine. Including both of the primary U.S. adversaries allows us to more generalizably assess how public pressures might operate in future conflicts. Major conflict with China or Russia would likely involve U.S. extended deterrence dynamics, such as commitments to Australia, Japan, South Korea, or NATO states.

This high-stakes scenario depicts a conflict between major U.S. adversaries and a key U.S. ally, Japan—where more than 50,000 U.S. troops were stationed at that time of writing. It is also a conflict in a region where U.S. credibility toward South Korea, Taiwan, and beyond hinges on protecting partners' territorial claims.[8] Because the survey was fielded during the Russo-Ukrainian War, with Washington supporting Ukraine against Russian expansionism, the scenario is likely to have been seen as plausible and salient. This should have improved respondents' attention and accuracy (Bradburn, 1978).

The high-stakes nature of the scenario could also be a limitation, however. Attitudes about certain weapons could vary in lower-stakes contexts involving intrastate conflict or non-state actors. However, each studied weapon has been used in both interstate and intrastate settings and by both state and non-state actors—excepting nuclear arms.

Importantly, respondents reacted to a situation involving an ongoing conflict that had not yet involved WMDs. Thus, for several systems, we test arguments about weapon aversion in the context of first use. This is a core component of the nuclear taboo, and our design choice echoes other studies (e.g., Press et al., 2013).

Respondents received pairs of potential "strike packages" to stop the flow of weapons to an adversary in conflict with Japan by attacking a munitions factory. This allows us to test the effects of civilian versus military casualties. Our choice echoed one of the two uses of nuclear weapons in warfare, as the bombing of Nagasaki was partly motivated by the city's many munitions factories. To remove possible confusion about the definitions and effects of weapon systems, all respondents were given a brief summary of each armament type under study.[9] While these summaries cannot capture all the nuances of each weapon, they remind respondents of typical features and serve as heuristic triggers.

Strikes were randomly assigned four characteristics: the adversary targeted, weapon used, likelihood of success, and approximate casualties. This allows us to directly manipulate destructiveness and effectiveness to study the trade-offs individuals make when assessing various options. Although we cannot directly manipulate the perceived brutality of weapons, we vary the available weapons. Respondents read a brief description of each strike option:

> The military is considering a strike on a **ADVERSARY** factory that is building weapons for **ADVERSARY** warships operating in the East China Sea. The U.S. military would use **TYPE** weapons in the attack. The attack has a **EFFECTIVENESS** probability of destroying the factory and the surrounding area. The attack would kill **DESTRUCTIVENESS** people.

Table 1 details the potential options in the conjoint survey.

Our survey had two options for strike effectiveness: a 95 or 65% chance of success. Less effective strikes are unlikely to be seriously considered. These options allow us to compare negligible and non-negligible risks of failure. Future studies may wish to consider other gradations.

We include three attribute levels for destructiveness: "some," "many," or "a massive amount" of casualties. This allows for significant variance, while acknowledging attacks on an industrial asset are likely to be lethal. We used approximate levels of casualties for three reasons. First, exact counts are unlikely to be known in advance or quickly communicated to the public by the media or

[4] Prolific uses nonprobability sampling among a panel of survey-takers, as is standard for other online survey firms like YouGov. Panelists opted in to take the survey, which they were told was about foreign policy.

[5] The United States does not have an active chemical or biological weapons program or stockpile. Washington does have the ability to reconstitute such programs if a leader ever desired to do so. Other nations have similar option sets regarding weapons (or subsets).

[6] For example, the nuclear taboo may be stronger in Japan given its national experience.

[7] We expect few preconceived notions about East China Sea disputes, although respondents may be informed about South China Sea disputes.

[8] Attitudes about weapons could vary in lower-stakes contexts, such as those involving intrastate conflict or non-state actors.

[9] See the Online Appendix for the survey instrument.

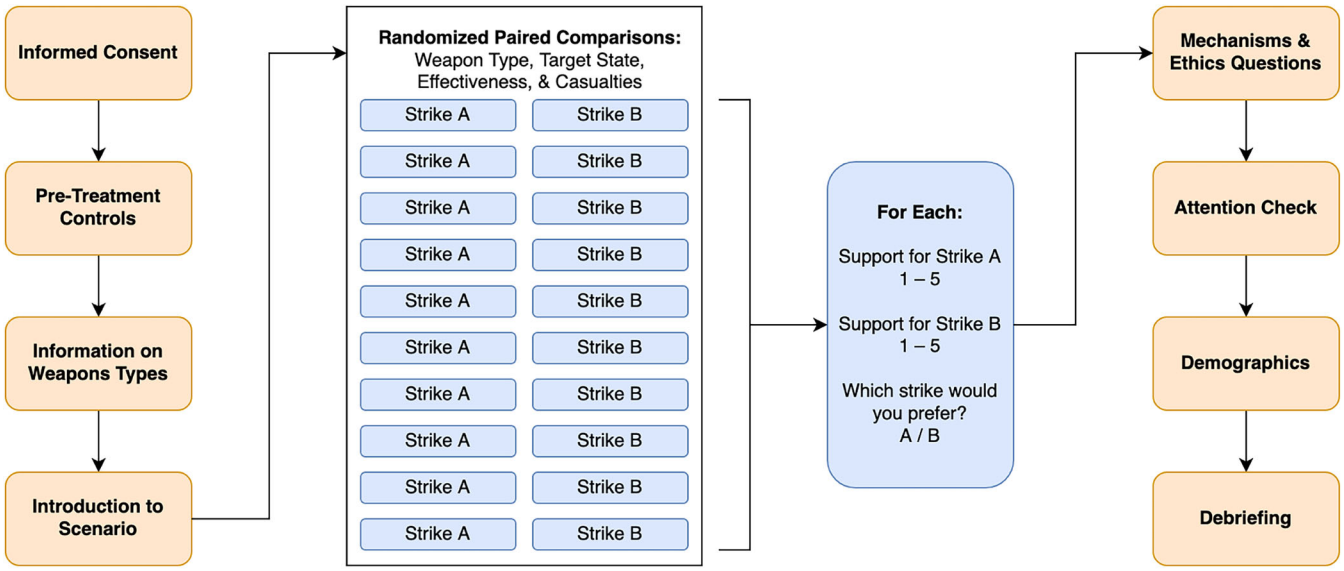

Figure 1 Survey flow sequencing.

Table 1 Treatment options.

Target	Type	Effectiveness	Destructiveness
Chinese	nuclear	95%	a massive amount of
Russian	chemical	65%	many
	biological		some
	cluster		
	conventional		
	cyber		

governments. Second, it is important to prime respondents to consider casualties, as previous work shows that the public does not account for them otherwise (Rich, 2019). Third, providing precise casualty numbers can result in "psychic numbing" and decision paralysis (Blacksin, 2023; Dudziak, 2021).

It is important to note that the vast majority of cyber operations do not cause physical effects. But in rare instances indirect casualties may occur, such as in the 2020 ransomware attack on Germany's Rhineland-Palatinate hospital network. A 2015 cyber attack on Ukraine's power grid left more than 230,000 people without electricity in freezing conditions, endangering lives. Attacks have targeted other critical infrastructure, such as a 2021 incident involving a Florida water treatment plant that risked mass poisoning. Safety systems have also been jeopardized, as in a 2017 attack on a Saudi oil refinery. China's pre-positioning of malware on such systems raises concerns about future lethal cyber attacks. These examples show the dangers lurking in cyber attacks, even if they are often seen as less threatening.[10]

Our conjoint experiment allows us to evaluate the three hypothesized theoretical mechanisms. We can observe how respondents view the importance of a strike's destructiveness and effectiveness, while comparing attitudes about different weapon systems.

After reading about the two strike options, respondents were asked to indicate their support for each strike on a five-point Likert scale. Then, to more accurately differentiate between options with similar support, respondents selected the strike they would prefer if they had to choose one. This process was repeated; each subject evaluated twenty strikes, selecting one from each of ten pairs.[11] Respondents then indicated how they weighed each of the four features (weapon type, target state, destructiveness, and effectiveness) in their decisions. Subjects also rated how important each factor was in determining the ethics of the strike. Figure 1 depicts the survey flow.

Results

Figures 2 and 3 detail how respondents reacted to each strike. The figures depict average marginal component effects (AMCEs) with two different dependent variables.[12] First, Figure 2 (*Approval*) shows the level of support for the attack—from strong disapproval (1) to strong approval (5). Second, Figure 3 (*Preference*) reflects a binary variable indicating whether or not respondents chose the attack over a randomly selected alternative.

The unit of analysis is respondent-pairing. Each line of data reflects a single respondent's comparison between, and reaction to, a randomly allocated pair of scenarios. Our design conveys considerable statistical power. We have 20,920 observations reflecting 10 pairings seen by 1,046 respondents. We cluster standard errors by respondent.

Weapon norms

To isolate the effect of weapon type, we hold constant the odds of an attack's success and the scale of the destruction. Thus,

[10] This misconception may stem from a lack of public awareness. Lethal attacks may shift public perceptions (Hedgecock & Sukin, 2022; Shandler et al., 2021, 2022, 2023).

[11] The randomization in the conjoint design ensured an appropriate demographic balance. See Online Appendix Table 8.

[12] AMCE estimators were calculated using the "cjoint" package in R (Hainmueller et al., 2014). The full ordinary least squares (OLS) regression models underlying these AMCE estimates are detailed in Online Appendix Table 3.

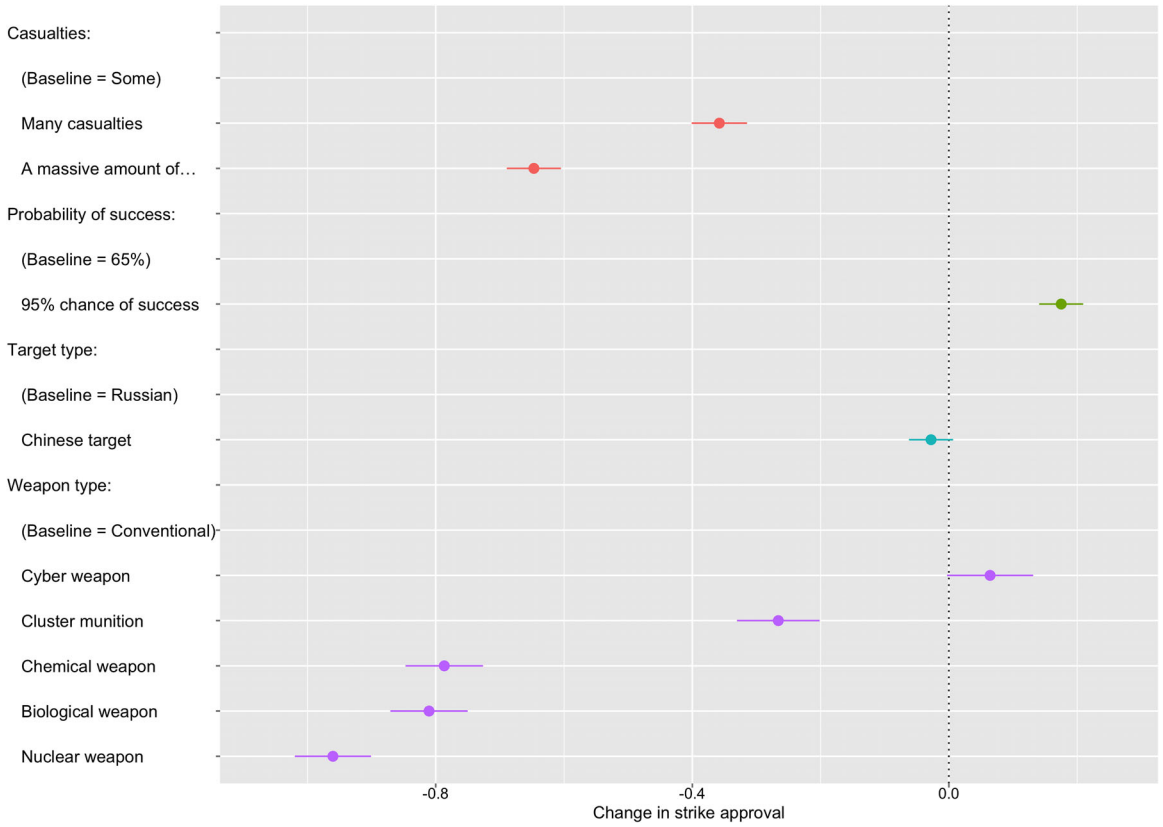

Figure 2 Approval of weapon strikes.

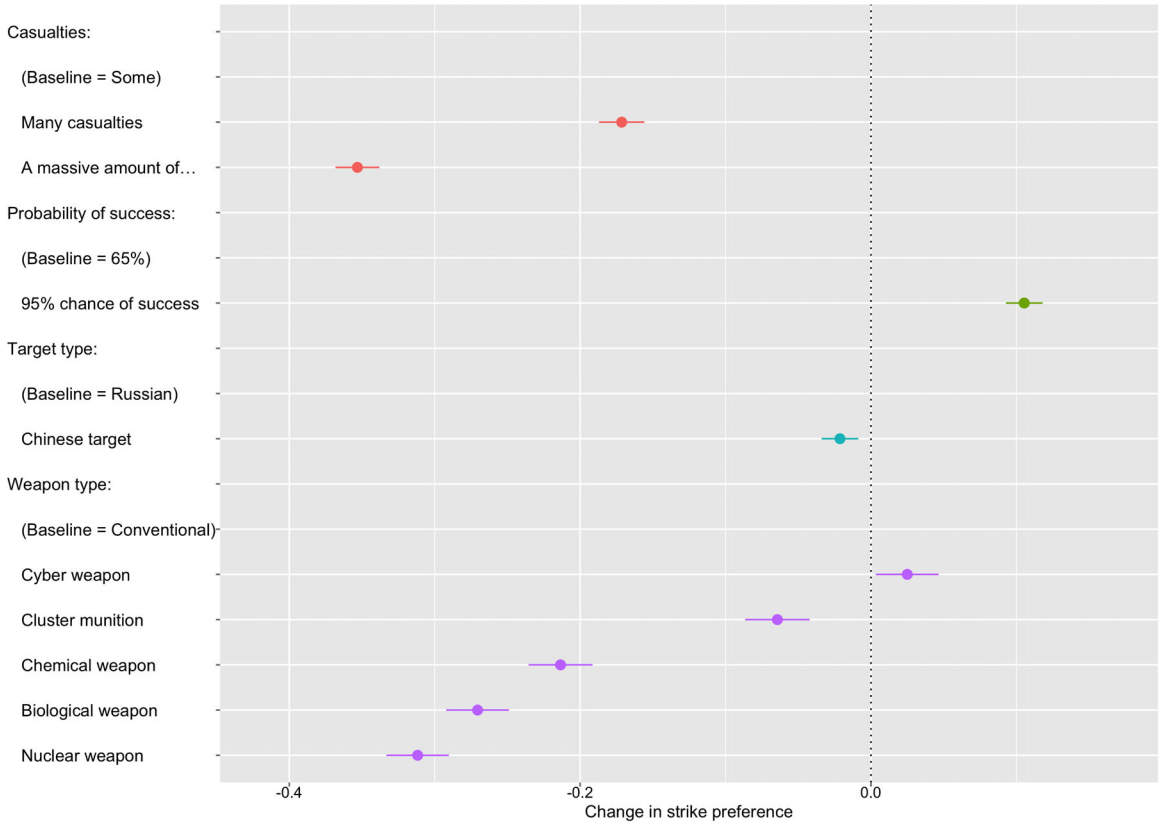

Figure 3 Preference for weapon strikes.

we can conclude that differences in respondents' opinions about using armaments are not solely due to perceived effectiveness or destructiveness. Instead, respondents understand that each weapon is distinct.

Respondents show differing degrees of willingness to support the use of different weapons—even when holding constant strategic considerations related to the impact of the strike. This suggests that weapon *types* function as powerful heuristics, activating normative frameworks that predispose individuals to favor or oppose certain weapons, independent of purely consequentialist calculations. Given the complexity of modern weaponry and military operations, public opinion regarding weapon use is likely shaped by mental shortcuts or rules of thumb rather than detailed technical knowledge. Categories like "nuclear," "chemical," and "cyber" serve as heuristics, triggering moral intuitions and associations, even if the actual effects of a specific use case are more nuanced.[13] The public is more averse to certain weapons than others. Moreover, we show that weapon norms drives preferences beyond the impact of other important strategic factors.

According to H1, we expect respondents to be more averse to more horrific and indiscriminate weapon systems. The base category for AMCEs in Figure 2 is the use of conventional weapons. Controlling for how effective and destructive these weapons are, we find that Americans are most favorable towards strikes involving cyber weapons, followed by conventional arms. There is some resistance to cluster weapons and significant aversion to chemical and biological weapons, with chemical weapons slightly preferred to biological weapons.[14] Based on these results, we determine that the greatest public aversion is to nuclear weapons, contrasting with Smetana et al. (2023), who find that the U.S. public prefers nuclear to chemical arms due to the latter's association with "rogue" states (which we did not prime). Our findings show multiple, weapon-specific anti-use norms, in line with H1.

Respondents' preferences generally align with several distinct characteristics: legality, horrific effects, and the technical ability to be (in)discriminate. These three factors are largely interdependent. Indiscriminate weapons are more likely to be banned and less likely to be used. Each of these factors contributes to the strength of anti-use norms and has been theorized as a mechanism underlying moral opposition to weapon use.

Nuclear arms are the most indiscriminate weapon and least supported by our respondents. Nuclear weapons are also the most horrific weapons, in that their impacts cause horrible and longstanding effects. Biological and chemical weapons are also hard to control—making it difficult to use these weapons discriminately—and can cause horrific bodily effects. Respondents, accordingly, show a clear aversion to using WMDs.

In contrast, conventional weapons are easier to target precisely, have comparatively less horrific effects, and are met with more approval among respondents. However, that subjects favor cyber over conventional weapons may be surprising in this framework. Entanglement of civilian and military digital infrastructure means cyber arms risk indiscriminate harm. However, these effects would generally be less horrific than those caused by conventional weapons (Brantly, 2020; Petkis, 2015). Respondents may also very well be unfamiliar with cyber entanglement.

	Conventional	Cyber	Cluster	Chemical	Biological	Nuclear
Conventional	0.0	0.1	-0.2	-0.6	-0.6	-0.7
Cyber	-0.1	0.0	-0.2	-0.6	-0.7	-0.8
Cluster	0.2	0.2	0.0	-0.4	-0.4	-0.5
Chemical	0.6	0.6	0.4	0.0	0.0	-0.1
Biological	0.6	0.7	0.4	0.0	0.0	-0.1
Nuclear	0.7	0.8	0.5	0.1	-0.1	0.0

Figure 4 Cohen's *d* for approval, by weapon pairings.

The results also support H1 by largely reflecting the legality of each system. For example, respondents are hesitant about cluster weapons—banned by a majority of countries (but not the United States)—and more tolerant of weapons less regulated by international law, like conventional and cyber weapons. However, Americans oppose nuclear use the most, though Washington does not subscribe to a ban on nuclear arms. Nevertheless, the situational use of nuclear weapons could be illegal under international law—due to their indiscriminate effects—even without a blanket ban.

The distinction between WMDs and other weapons is further supported by estimates of effect size. Figure 4 shows Cohen's *d* for approval based on weapon pairings. WMDs show medium to large effect sizes ($d > 0.5$) compared to other weapon types. In comparison, while we see a statistically significant decrease in support and approval ($p < .001$) for the use of nuclear weapons compared to chemical and biological weapons, the estimated effect of moving between WMDs is smaller ($d = -0.14$ and -0.12, respectively). Cluster weapons, which blend some characteristics of conventional weapons and WMDs, see moderate effect sizes in both directions ($d = -0.2$ and 0.4).[15]

Cyber weapons occupy a unique position in our results as the only weapon respondents prefer over conventional weapons. Though some scholars have suggested that there may be a norm against the military use of cyber weapons (Nye, 2018), this may be a state-centric phenomenon. For example, Russia showed cyber restraint during the war on Ukraine (Lonergan & Schneider, 2023). However, we do not observe cyber restraint among the U.S. public. Instead, the public is less averse to cyber operations than kinetic alternatives. This accords with the view that cyber operations are perceived as less escalatory (Lin-Greenberg, 2023).

We explore respondents' preferences further in Figure 5, which provides more support for H1. We find reluctance to use WMDs such as nuclear, chemical, and biological weapons, and a preference for cluster, conventional, and cyber options.

We find lower support for strikes with nuclear weapons than previous scholarship. Only 32.7% of respondents prefer strikes with nuclear weapons over randomly selected alternatives.[16] On

[13] We trigger these heuristics with our summaries of each system. Publics lack expert background, and we expect limited knowledge about more rare weapon types.

[14] This could reflect memories of the coronavirus pandemic.

[15] See Online Appendix Tables 6 and 7 for pairwise comparisons of ACMEs by weapon systems.

[16] This is a forced choice; subjects cannot choose neither strike.

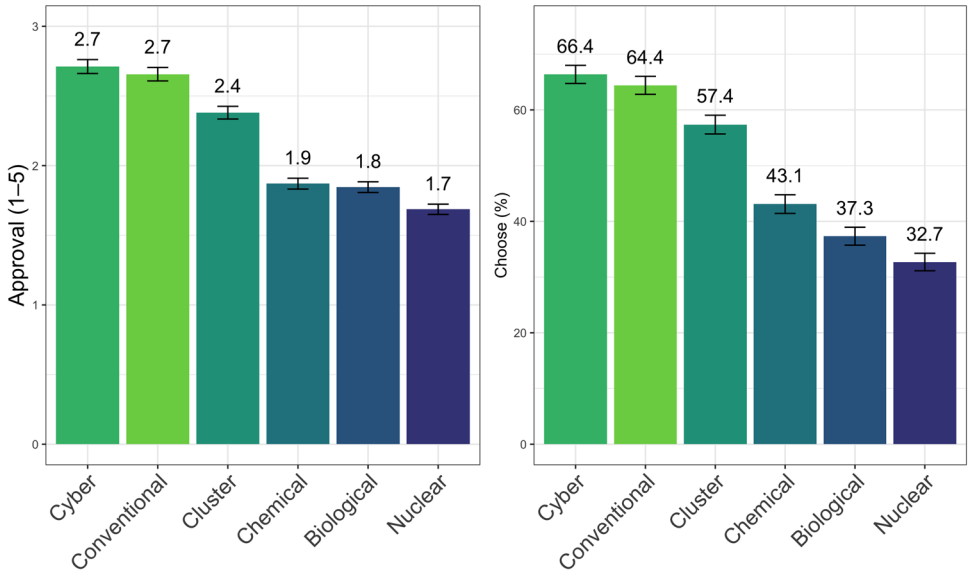

Figure 5 Respondents support conventional and cyber operations at higher rates than banned and more horrific or indiscriminate weapon systems.

average, subjects say that they "somewhat disapprove" of the use of nuclear weapons. In comparison, they "neither approve nor disapprove" of conventional or cyber strikes. By and large, the public prefers to avoid nuclear weapon use even when doing so carries an effectiveness penalty. Faced with a nuclear strike with a high probability of success and a non-nuclear strike with more moderate odds, our respondents chose the non-nuclear option 76% of the time. This is a significant deviation from previous scholarship, such as Press et al. (2013), where respondents preferred more effective nuclear strikes over less effective conventional alternatives.

This difference is to be expected, in part, because our conjoint experiment explicitly varies the effectiveness of each possible strike. Thus, respondents could be presented with options where nuclear weapons were less effective than an alternative, as well as scenarios where they were equally or more effective. We may also find lower support for nuclear use than previous studies because our respondents were presented with various non-nuclear alternatives. When nuclear weapons are one choice on a broader menu of strike options, Americans may be less willing to tolerate their use. Previous studies have often only asked about nuclear use or offered a single, usually conventional, alternative. Nuclear first use in our study could also risk nuclear retaliation, as the adversary—Russia or China—is nuclear-armed. In addition, we cannot rule out that the public might prioritize effectiveness more strongly in much higher-stakes scenarios, such as after an attack on U.S. territory.

Our results further differ from previous work on cross-cutting weapon norms, such as Smetana et al. (2023). In contrast to this scholarship, we find that respondents oppose nuclear weapons more than other WMDs. But we similarly observe strong aversion towards chemical and biological weapons.

Retaliation risk

We argue that differences in respondents' willingness to endorse the use of various weapons are due primarily to normative considerations, with retaliation risk a secondary concern. To demonstrate this, we asked respondents to evaluate the retaliation

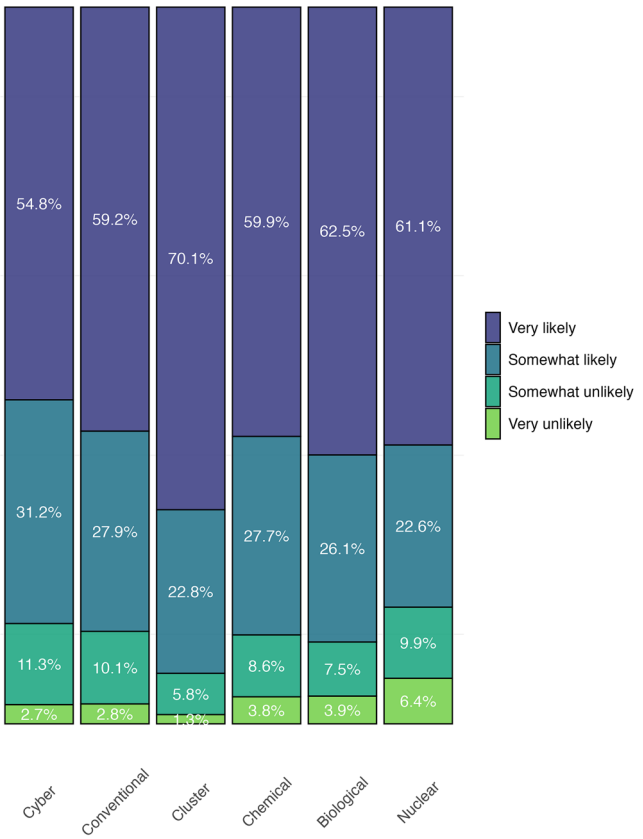

Figure 6 Would China respond with a significant counterattack to this type of strike?

risk associated with different weapons. Figure 6 shows that respondents believe the chance of a counter attack occurring in response to *any* strike is high. Yet, Americans are generally quite willing to approve of U.S. military action nonetheless.[17]

[17] Previous research similarly suggests that the U.S. public is quite hawkish (Dill et al., 2022).

Thus, the likelihood of a counter attack does not drive weapon aversions.

Respondents are relatively supportive of strikes using cluster munitions, despite believing that these actions are the most likely to escalate. Respondents are more opposed to nuclear than biological weapons, but 4.9 percentage points more likely to believe that biological attacks will escalate than nuclear ones. There are negligible differences in expected escalation between favored weapon types (87.1% believe conventional attacks will escalate) and unfavored ones (87.6% anticipate escalation from chemical attacks).[18]

Effectiveness and destructiveness

Beyond the armaments used, we expect respondents to be attuned to a strike's strategic impacts. In particular, we theorized that subjects would focus on an attack's likely effectiveness (H3), or its probability of success. Additionally, we focused on the strike's destructiveness (H2), or the scale of its likely casualties. While some scenarios involve a 95% probability of destroying the target, others have only a 65% chance. Americans are significantly more likely to support the former operations, as predicted by the "effectiveness" hypothesis and in line with work by Eichenberg (2005) and others. For example, 26.5% of respondents strongly or somewhat approve of attacks with a high probability of success. Just 19.8% feel similarly about attacks with more moderate odds of success. This aligns with H3's predictions that subjects will prefer more effective operations.

Table 2 shows the ordinary least squares (OLS) results for strike approval (Model 1) as well as interactions between weapon type and effectiveness (Model 2) and weapon type and destructiveness (Model 3). For a conventional weapon, the boost in approval from increasing the probability of success from 65% to 95% is 0.273 units. However, for biological and nuclear weapons, this positive impact is notably dampened (by 0.186 and 0.128 units, respectively). Even when these weapons achieve high effectiveness, underlying normative concerns about their inherent risks make the "effectiveness boost" less pronounced. In essence, beliefs about the inherent characteristics of WMDs partially offset the benefits of high effectiveness.

Consistent with H2, we also find that respondents prefer low-fatality strikes. Compared to attacks that would kill "a massive amount of" people, respondents are significantly more likely to approve of and prefer attacks killing "many" or "some" people. For example, 31.5% of subjects approve of operations with low casualties, compared to 21.4% and 16.3% supporting operations with medium and high casualties, respectively. Such strong preferences for avoiding collateral damage align with Gelpi et al. (2009), despite some previous research arguing that Americans are insensitive to foreign civilian deaths (Sagan & Valentino, 2020).

Further, the interaction effects in Table 2 reveal that the penalty associated with increased casualties is partially mitigated for certain weapons. While the baseline penalty for moving to "many" or "massive" casualties is −0.357 and −0.715 units, respectively, these negative effects are less severe for WMDs. For example, the additional penalty for nuclear weapons is only

[18] We do not ask respondents about the expected impact of retaliation; this could vary across weapons.

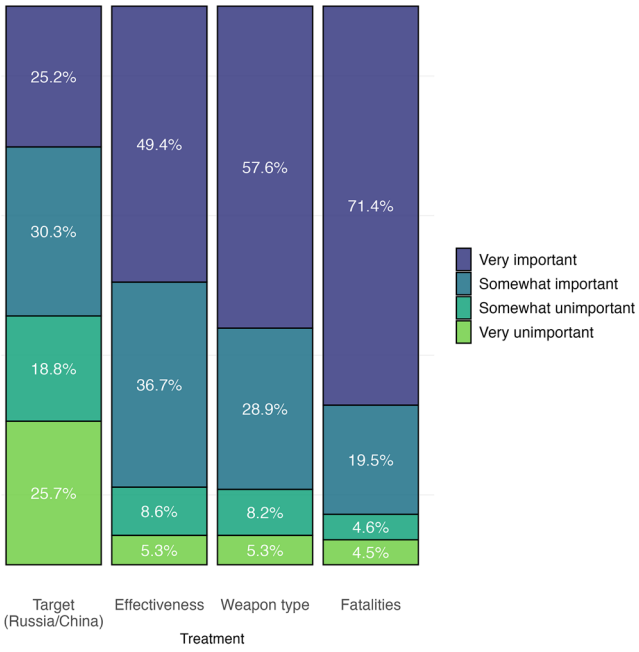

Figure 7 Self-reported importance of treatment type on preferences.

−0.202 for "many" casualties and −0.415 for "massive" casualties. Respondents may already associate these weapons with collateral damage due to their indiscriminate nature, so explicit information on destructiveness does not diminish approval as much as for conventional weapons. This finding reinforces the argument that normative beliefs about weapon types fundamentally shape how effectiveness and destructiveness cues are interpreted.

How do respondents prioritize different treatments? Figure 7 shows how subjects rated target, weapon type, effectiveness, and casualties as influencing their preferences. Respondents report some attention to target type and moderate attention to effectiveness. A slight majority did not think the effectiveness of an attack was very important in determining whether it was the preferable operation for the U.S. military. In contrast, respondents significantly value information about weapon type and strike destructiveness. A total of 71.4% of respondents reported that the number of casualties from an attack was very important, supporting H2. Meanwhile, 57.6% reported weapon type as "very influential" in their decision.

Respondents are more sensitive to casualties than effectiveness. For example, subjects are 23.1 percentage points more likely to choose a low-fatality attack with a moderate chance of success than a high-fatality attack with a high chance of success. Faced with a medium-fatality attack with a moderate chance of success and a high-fatality attack with a high chance of success, respondents are 6.8 percentage points more likely to choose the one inflicting less damage. This again shows the importance of minimizing destructiveness (H2) over maximizing effectiveness (H3).

While respondents report destructiveness as the most important factor in their decisions, are they willing to "forgive" casualties under certain conditions? Respondents are sometimes willing to support high-fatality attacks, but they certainly do not want unnecessary violence. They strongly or somewhat approve of

Table 2 OLS results with interactions, standard errors clustered by respondent.

	Dependent variable: Approval		
	Model 1	**Model 2**	**Model 3**
Cyber	0.061 (0.035)	0.091 (0.048)	0.165** (0.060)
Cluster	−0.237*** (0.033)	−0.187*** (0.045)	−0.228*** (0.058)
Chemical	−0.731*** (0.030)	−0.678*** (0.042)	−0.831*** (0.053)
Biological	−0.756*** (0.031)	−0.660*** (0.042)	−0.895*** (0.055)
Nuclear	−0.909*** (0.031)	−0.842*** (0.043)	−1.113*** (0.053)
Chinese	−0.026 (0.017)	−0.026 (0.017)	−0.026 (0.017)
95% effectiveness	0.179*** (0.018)	0.273*** (0.047)	0.178*** (0.018)
Many casualties	−0.326*** (0.022)	−0.326*** (0.022)	−0.357*** (0.057)
Massive casualties	−0.571*** (0.022)	−0.571*** (0.022)	−0.715*** (0.057)
Cyber:95% effectiveness		−0.055 (0.067)	
Cluster:95% effectiveness		−0.095 (0.064)	
Chemical:95% effectiveness		−0.100 (0.062)	
Biological:95% effectiveness		−0.186** (0.061)	
Nuclear:95% effectiveness		−0.128* (0.062)	
Cyber:Many casualties			−0.158 (0.084)
Cluster:Many casualties			−0.037 (0.080)
Chemical:Many casualties			0.065 (0.074)
Biological:Many casualties			0.100 (0.075)
Nuclear:Many casualties			0.202** (0.075)
Cyber:Massive casualties			−0.153 (0.083)
Cluster:Massive casualties			0.016 (0.076)
Chemical:Massive casualties			0.244*** (0.072)
Biological:Massive casualties			0.325*** (0.075)
Nuclear:Massive casualties			0.415*** (0.073)
Constant	2.840*** (0.029)	2.790*** (0.036)	2.897*** (0.042)

Note. Baseline condition is conventional weapon, Russian target, 65% effectiveness, some casualties. 20,308 observations in 1,046 clusters.
*$p < .05$; **$p < .01$; ***$p < .001$.

high-fatality attacks 16.3% of the time. However, respondents prefer high-fatality attacks when they score "well" on other measures. For example, respondents are 9.3 percentage points more likely to favor attacks with high casualties if they are highly effective.[19] This emphasizes complementarities between our hypotheses; respondents may have ordered preferences regarding various features of strikes, but they are willing to make trade-offs.

Given the influence of public opinion on military policy (e.g., Chu & Recchia, 2022; Lin-Greenberg, 2021; Smetana et al., 2025), there may be pressure to account for ethical considerations. For instance, whether an attack would be highly destructive and what weapons it would use may take precedence over certain strategic concerns. We find evidence that the destructiveness logic (H2) supersedes concerns about effectiveness (H3), and that the public's heuristics about different weapons filter information about destructiveness and effectiveness.

Conclusion

What makes a weapon too brutal to use? In examining multiple weapon systems, our research uncovers a novel hierarchy underlying public preferences for military operations. Americans prefer cyber operations to conventional strikes, which are seen as favorable to using cluster munitions. But as attention-grabbing as media headlines about cluster bombs may be, public aversion to these weapons pales in comparison to attitudes toward WMDs. We find pronounced distaste for strikes involving chemical, biological, and nuclear weapons. Yet, weapon type is not everything. Context matters. No single factor or strike feature solely determines public support for a military operation. Likewise, no weapon appears to be universally verboten—or universally acceptable—to the U.S. public, in contrast to work on the taboo–permissiveness dichotomy (Tannenwald, 1999, 2007). Instead, respondents are sensitive to multiple strategic and moral considerations when evaluating actions in combat, with several complementary considerations at play.

Our study categorizes weapons by type to understand broad public preferences. However, we recognize that this approach simplifies a more complex reality. Weapon type serves as a simplifying heuristic, reflecting how the public understands weapon use. However, there are limits. For example, while analysts typically categorize "conventional weapons" as less horrific and indiscriminate than WMDs, the devastating firebombing of Tokyo with incendiaries demonstrated that "conventional" weapons can inflict horrific civilian casualties. Similarly, the use of "chemical" riot control agents in Ukraine, while technically violating chemical weapon

[19] This difference is 8.7 percentage points for low-fatality attacks and 9.9 percentage points for medium-fatality attacks.

bans, may be perceived differently by the public than the use of nerve agents. This is both a limitation and a feature of our design: It captures how the public intuitively maps moral and legal concerns onto weapon categories, even when technical or legal nuances vary. Future research could explore these nuances by examining specific weapon *uses* within each category, rather than relying solely on weapon *type* as a proxy.

Scholars have long studied norms against using certain weapons in combat. They have, however, often examined pieces of the puzzle in isolation, studying individual weapon systems or acts of warfare. We contribute to this literature by systematically comparing several types of arms and the interplay of multiple strike characteristics. Consider, for example, what our survey results suggest about the relationship between the military killing civilians and accomplishing its mission. While both effectiveness and destructiveness matter, our results show that the U.S. public is willing to sacrifice effectiveness to reduce collateral damage.

Crucially, while each factor we tested individually contributes to preferences toward—and approval of—military strikes, respondents focused on the entire scenario. Our results show that people are willing and able to make trade-offs between various factors such as weapon type, effectiveness, and destructiveness. This is not to say that all factors were treated equally. Respondents demonstrated well-ordered preferences, prioritizing first the predicted number of casualties and then the type of weapon used to inflict them. They favored cyber weapons over conventional, cluster, chemical, biological, and nuclear weapons in descending order of preference. No one factor, however, totally outweighed all others. Low-fatality strikes garnered less support when described as less likely to succeed or when employing more indiscriminate weapons.

While we can speak to perceptions of conflict with two different major U.S. rivals, China and Russia, it is possible that respondents would weigh factors differently when facing a much weaker adversary. The al Qaeda affiliate featured in Press et al. (2013) is illustrative. Nevertheless, we find similar perceptions of strike options whether the opponent is China or Russia, the most-likely case scenarios for using the most powerful U.S. weapons. This suggests that weapon appropriateness is not significantly target-dependent. Further research would do well to investigate if such views change when the United States confronts adversaries with more limited retaliatory capabilities, as well as scenarios with much higher and lower stakes, to evaluate how stakes affect weapon-use preferences. Moreover, while our conjoint experimental approach offers high internal validity and statistical power to isolate the effects of specific attributes, it presents respondents with a controlled information environment. Real-world public opinion is often formed amid incomplete, emotionally charged, and politically framed narratives. Experimental research designs cannot fully capture these dynamics—an important consideration for future studies.

There are at least four noteworthy implications of our findings. First, the use of WMDs is likely to result in significant public backlash, especially when other options are available. This is true both for the chemical and biological arms whose use the United States has forsworn under international law, as well as nuclear arms. Our findings on WMDs are in line with the scholarship of Tannenwald (2005), who argued that nuclear arms are uniquely reviled. Our results thus contrast with those of Smetana et al. (2023) and the notion that nuclear strikes are more palatable among the public than chemical ones. Likewise, we do not observe the high propensity to support nuclear use seen by Press et al. (2013) and Sagan and Valentino (2017). Even when we control for strike casualties and effectiveness, Americans still dislike the use of WMDs considerably more than other weapons. Strong public aversion could thereby limit the options available to political officials (Chu & Recchia, 2022; Smetana et al., 2025) and military leaders (Lin-Greenberg, 2021).

Second, the future of cyber arms control looks particularly bleak. Controlling this class of weapons is difficult enough as it is, given the more intangible nature and the problem of distinguishing dual-use technologies (Vaynman & Volpe, 2023). Complicating this picture, our respondents' views are quite different from those of Nye (2018), who argues that there are emerging norms against using weapons in cyberspace. Subjects' perceptions seem closer to those of Blake and Imburgia (2010) and the notion of cyber arms as acceptable, "bloodless" weapons. Indeed, we find that Americans are significantly more likely to prefer cyber operations to all other strikes, including those involving conventional arms.

Third, while using nuclear, chemical, and biological weapons still seems beyond the pale, cluster munitions do not appear to be too brutal for war, at least amongst the American public. Although we find that respondents prefer conventional and cyber weapons to cluster munitions, these purportedly "taboo" weapons are treated more like conventional armaments than WMDs. More than two-thirds of the public strongly support a ban on nuclear, chemical, and biological weapons; less than one-third strongly support prohibiting cluster munitions. At the policy level, it is therefore unsurprising that U.S. domestic pushback against providing cluster munitions to Ukraine ultimately failed to gain much traction. Our results suggest that there is simply no comparison between Vladimir Putin's nuclear threats and Joe Biden's decision to provide cluster munitions to Kyiv.

Fourth and finally, our results speak to the underlying features contributing to weapon aversions among the public. Previous work has examined these features across a small number of armaments, with the majority of studies focusing on the foundations of the non-use of nuclear weapons. Our work across many systems provides theoretical innovation and clarity regarding how the public makes trade-offs between destructiveness, effectiveness, and the indiscriminate or horrific nature of a wide variety of weapons. Although future research should test how these dynamics affect aversion to additional arms—such as lethal autonomous systems or remote systems like drones—our contributions establish a framework for evaluating emerging and evolving capabilities. For example, our work highlights a precision–usability trade-off that will be increasingly relevant for modernized missile systems with improved guidance, conventional weapons paired with artificial intelligence targeting capabilities, and next-generation cyber exploits. These emerging capabilities may not yet have experienced the same public backlash and persistent norm entrepreneurship that was critical to the process of defining and institutionalizing aversion to systems like WMDs. But our results suggest that public perceptions may nevertheless be sufficient to generate meaningful aversion or favorability. After all, these preferences are not mere reflections of strategic reasoning. They are expressions of deeper

categorical judgments that shape which weapons are viewed as illegitimate.

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Author contributions

All authors contributed equally to this work.

Conflicts of interest

None declared.

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Data availability

The data, replicable R scripts, and Online Appendix are available at https://www.prio.org/journals/jpr/replicationdata.

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